ABSTRACT

A method for developing machine or process specific predictions of error codes and machine or processes events associated with the operation of one or more machines or processes is provided. The method involves a data set evaluation phase and a monitoring phase. The data set evaluation phase requires an analysis of historical operating data from said one or more machines or processes to identify significant precursor patterns associated with the occurrence of the error codes or events. The method next involves developing predictive models based on the application of one or more statistical tools and pattern recognition techniques whereby future occurrences of the error codes may be predicted within a defined time window from an analysis of the occurrences of significant precursor events within a data collection time window which precedes the prediction time window. Operating data, including the occurrences of the significant precursor events, are then collected during the data collection time window. The predictive model is applied to the data collected during the data collection window to generate predictions of the occurrence of the error codes within a predefined prediction time window.